Actuarial Committee
Agenda
September 26, 2007
Level 2, Room 1
2:00 pm – 4:00 pm

Call to Order
Chuck Bryan, Chairman

Roll Call
Larry Rhodebeck, Scribe

Approve Minutes of August 24 meeting
Chuck Bryan

New Business/Action Items

1. Discussion and Approval of Actuarial Committee Charter
   Chuck Bryan and John Pedrick

2. Rule-making process
   Tom Sico Legal Department
   - Review and make recommendation to Board for Public Employer Taxing Districts (PEC) rate change
   - Review and make recommendation to Board for Annuity Table change*(possible vote to recommend approval to the Board of Directors)*
     John Pedrick

Discussion Items*

1. Update on MIRA II
   John Pedrick

2. Medical Cost increases
   - Discussion of impact on rates and reserves
   - Why and how to control costs
     Bob Coury, Chief, Medical Services
3. Response to Inspector General Report re: Manual Override of Rates
   Representative of Legal Department

4. Prioritize actions for future Committee meetings

* Not all discussion items have materials included.

Next Meeting: October 25, 2:00 pm – 4:00 pm

WORKERS' COMPENSATION
BOARD OF DIRECTORS

ACTUARIAL COMMITTEE

FRIDAY, AUGUST 24, 2007, 8:00 A.M.
WILLIAM GREEN BUILDING
THE NEIL SCHULTZ CONFERENCE CENTER
30 WEST SPRING ST., 2nd FLOOR (MEZZANINE)
COLUMBUS, OHIO 43215

Directors Present: Charles Bryan, Chairman
James Hummel
Jim Matesich

Directors Absent: None

CALL TO ORDER

Mr. Bryan called the meeting to order and reported all directors were present.

ELECTION OF CHAIRMAN

Mr. Hummel nominated Mr. Bryan as chairman of the Actuarial Committee. Mr. Matesich seconded and Mr. Bryan was elected by a roll call vote of three ayes and no nays.

INTRODUCTIONS

There were introductions among those present of directors of the Actuarial Committee, the BWC Actuarial Department, other BWC departments, Oliver Wyman Consulting Actuaries, and the public.

ROLE OF THE ACTUARIAL COMMITTEE

Mr. Bryan reported that the role of the Actuarial Committee was in pricing workers' compensation premiums, reserving the liabilities of the State Insurance Fund, setting the target level for net assets, and reviewing current BWC staffing and use of consultants.

AON REPORT ON THE ACTUARIAL FUNCTION

John Pedrick, Chief Actuary, delivered the report from Aon Actuarial & Analytical Consulting to the Workers' Compensation Oversight Commission. The report includes evaluation of historical BWC profitability; evaluation of BWC's current surplus adequacy and premium ratemaking methodologies; and evaluation of BWC's current practices relatives to industry standards in the areas of ratemaking and reserve development. The Aon report also emphasized group rating issues.

Mr. Bryan asked if there were any additional liabilities like those of the Disabled Workers Relief Fund (DWRF) which might affect the balance sheet. Mr. Pedrick replied that a discussion on those funds would be part of the September meeting agenda.

RESERVING METHODOLOGY

Jeffery Scott, Jeffery Scholl, and William Hansen, Oliver Wyman, presented a report on the reserving methodology which Oliver Wyman provides as actuarial consultant.

Mr. Bryan asked if Oliver Wyman had calculated the DWRF liability. Mr. Scott replied that Oliver Wyman had calculated the liability in the past. However, it was not included in financial statements until BWC was advised to do so by Schneider Downs & Co., Inc., for the fiscal year 2007 external audit. Oliver Wyman has also calculated liabilities for the Self-Insuring Employer's Guaranty Fund and the state agencies' portion of the State Insurance Fund.

Mr. Bryan asked who calculates the discount rate. Liz Bravender, Actuarial Director, reported that the discount rate is set by Tracy Valentino, Chief Financial Officer, and Barb Ingram, Financial Reporting Manager, from the interest rates of certain United States Treasury Notes.

Mr. Bryan and Mr. Matesich requested information on medical provided fee schedules and negotiation of provider fees by BWC.

Mr. Scott reported that the next Actuarial Audit will be released in September.

FUTURE PROJECTS AND SCHEDULING

Mr. Pedrick requested that the rate indication for public employer taxing districts be added to the agenda for September because the Workers' Compensation Board of Directors will need to approve the rule in November. The Oliver Wyman recommendation on taxing districts will be available in two weeks.

Mr. Bryan requested that all reports be available to the Actuarial Committee no later than two weeks before the next meeting. Ann Shannon, Legal Counsel, advised that the reports will be posted to the BWC web-site and would constitute public records.

Mr. Pedrick also requested that the MIRA 2 reserving system be on the September agenda. HB 100 requires that a new system be in place by July 1, 2008. The timing of implementation dictates that BWC go to the Controlling Board soon for permission to continue development of the system.

Mr. Bryan asked what the procedure for adoption of MIRA 2 is. Marsha Ryan, BWC Administrator, stated that she would bring the proposal to the Actuarial Committee for review and then the Committee would make its recommendation to the Workers' Compensation Board. Because of the legislative mandate, BWC would not necessarily need Workers' Compensation Board approval; however, BWC would want the advice and consent of the Workers' Compensation Board.

Mr. Pedrick finally requested that group rating be on the October agenda. Revision of group rating program is a long-term project and should begin as soon as possible.

Mr. Bryan asked if a change in the reserve would affect just annual reports or also affect monthly financial statements. Ms. Ryan replied that that the change is reflected on the monthly statements. Accordingly, Mr. Bryan requested that the October agenda should include a report on the June 30, 2007, reserve.

Mr. Bryan asked when the Actuarial Committee should review the net asset target level. Ms. Ryan replied that the discussion should be with the Investment Committee as well. Accordingly, Mr. Bryan stated that this will be on the November meeting agenda. Ms. Ryan stated that this issue should continue through 2008 because of the learning curve and coordination between committees.

Mr. Bryan requested a reported on staffing levels of the Actuarial Department and projects.

Mr. Matesich asked if MIRA 2 will be proprietary. Mr. Pedrick replied that the vendor, Fair Isaac Corporation, has been informed of the legislative mandate that a reserving system be transparent. At the heart of MIRA 2 will be a statistical analysis that produces the reserve. BWC will be setting up a public forum conducted by Fair Isaac to educate the General Assembly and public on reserving. BWC will need approval of MIRA 2 in order to meet the July 1, 2008, deadline.

Mr. Bryan asked if the WCB should go to the General Assembly to change the deadline. Ms. Ryan replied that BWC does not need a change of date. If BWC were to use a different vendor, then it would put BWC back eleven or twelve years in its ability to reserve. The vendor product will be available for inspection at a web-site maintained for the public by Fair Isaac.

Mr. Bryan asked that a review of legal requirements of HB 100 on reports and retention be included as a future meeting agenda item. He also requested that BWC staff provide information on all vendors.

ADJOURNMENT

There was a motion by Mr. Matesich, second by Mr. Hummel, and adjournment by Mr. Bryan.

Prepared by: Larry Rhodebeck, Staff Counsel
H:\Word\ldr\WCB Actrl 0807.doc
August 30, 2007

Actuarial Committee Charter
Draft
August 28, 2007

PURPOSE

The Actuarial Committee has been established to assist the Ohio Bureau of Workers' Compensation Committee Board of Directors in fulfilling their responsibilities through:

Monitoring the actuarial soundness and financial condition of the funds and reviewing rates, reserves and level of net assets
Oversight of the integrity of the actuarial audit process
Compliance with legal and regulatory requirements
Monitor the design and effectiveness of the actuarial studies
Confirm external actuarial consultants' qualifications and independence
Review performance of independent external actuarial work product

AUTHORITY

The Actuarial Committee has the authority to investigate any matter within the scope of its authority.

1. Consult in the appointment of and oversee the work of the independent actuarial firm engaged by Ohio Bureau of Workers' Compensation to complete actuarial studies
2. Recommend retention and oversight of consultants, experts, independent counsel and actuaries to advise the Committee on any of its responsibilities or assist in the conduct of an investigation.
3. Seek any information it requires from employees – all of whom are directed to cooperate with the Committee's requests, or the request of internal or external parties working for the Committee. These parties include the internal actuaries, all external actuaries, consultants, investigators and any other specialties working for the Committee.
4. Make recommendations to the Board of Directors of the Ohio Bureau of Workers' Compensation for Board decisions.

COMPOSITION

The Committee shall be composed of a minimum of three (3) members, elected by the Board of Directors' of the Ohio Bureau of Workers' Compensation.

Each committee member will be independent from management, and within a year of appointment or one year from the adoption of this charter, whichever is later, will become financially literate. At least one member of the Committee must be a certified actuary.

MEETINGS

By majority vote the Committee will establish their meeting schedule and how often they will report to the Board. The committee also has the authority to convene additional meetings, as circumstances require. The Committee will invite members of management, external actuarial firms, internal actuarial staff and/or others to attend meetings and provide pertinent information, as necessary. Subject to open meeting laws, the Committee will hold executive sessions and private meetings with actuaries and auditors, when required in the performance of their duties.

RESPONSIBLITIES

The Actuarial Committee shall have responsibility for the following:

1. Recommend actuarial consultants for the Board to use for the funds specified in the Ohio Revised Code.
2. Review calculation on rate schedules and performance prepared by the actuarial consultants with whom the Board contracts
3. Supervise for the Board's consideration the preparation of an annual report of the actuarial valuation of the assets, liabilities and funding requirements of the state insurance funds to be submitted to the Workers' Compensation Council and the Senate and House.
4. At least once every five (5) years have actuarial investigation of experience of employers; mortality, service and injury rate of employees; payment of benefits in order to update the assumptions on the annual actuarial report
5. Have actuarial analysis prepared of any legislation expected to have measurable financial impact on the system, within 60 days after introduction of legislation

THE RULE-MAKING PROCESS EXPLAINED

The state legislature has given state agencies the ability to adopt rules to implement and/or clarify laws. Agencies can use one of two methods. These methods are named after the Ohio Revised Code citation -- a "119" rule or a "111.15" rule.

The "119" rule-making process is mandatory, unless the legislature exempts an agency from that process, and allows them to use the 111.15 rule process. For BWC, the exempt (111.15) rules are generally related to rate rules.

1. BWC's Rule Making Process

- Rules are proposed by interested BWC Departments.
- BWC's Legal Division helps prepare rules & handles filing process with Register of Ohio and JCARR.
- To enact any BWC rule, the Board must first give its advice & consent.

2. Basic Chapter 119 rule process (106-115 days for completion)

- After BWC files proposed rule on-line at the Register of Ohio, BWC conducts public hearing on the rule (within 31 to 40 days of filing rule).
- Joint Committee on Agency Rule Review (J.C.A.R.R.) holds hearing on the rule within 65 days of rule filing. JCARR reviews the rules to determine that:
  - The rules do not exceed the scope of the rule-making agency's statutory authority;
  - The rules do not conflict with a rule of that agency or another rule-making agency;
  - The rules do not conflict with the intent of the legislature in enacting the statute under which the rule is proposed; and,
  - The rule-making agency has prepared a complete and accurate rule summary and fiscal analysis of the proposed rule, amendment, or rescission.
- JCARR's *only* option is to recommend that a rule be invalidated.
- If JCARR does not take action to invalidate a rule, at the end of JCARR's jurisdiction, BWC "final files" the rule to be effective no sooner than 10 days later.
- Properly promulgated rules have the force and effect of law.
- Public participation: BWC's public hearing

3. R.C. 111.15 rules (10 days for completion)

- The exempt rules are generally BWC rate rules
- These rules are filed with the Register of Ohio, but are not subject to public hearing or JCARR review.
- These rules are effective no sooner than 10 days from filing.
- Public participation: interested parties can provide informal input during rule preparation; proposed rules are distributed to interested parties.

- At a minimum, BWC must review its rules every 5 years to determine whether to:
  - Continue the rule without amendment;
  - Rescind the rule; or,
  - Amend the rule.

Ann Shannon
H:Rules 101 for WCB (9-07)as.doc
September 6, 2007

Workers' Compensation Board of Directors
Executive Summary
Public Employer Taxing District Overall Rate Change Indication
January 1, 2008 Policy Year

Public Employer Taxing Districts

Public Employer Taxing Districts include all non-state government entities in Ohio. They consist of approximately 3,800 cities, counties, townships, villages, schools and special districts.

Time Line

The policy year for the taxing districts' rates that we are now creating is January 1, 2008, through December 31, 2008. The premium will be due to BWC in May and September 2009.

Base rates for the manual classifications for taxing districts must be filed with the Legislative Services Commission and the Secretary of State by December 20, 2007, ten days prior to the effective date of January 1, 2008.

Letters informing the taxing districts of their premium rates will be created and mailed before January 1, 2008.

Workers' Compensation Board of Directors Process

The BWC Administrator recommends premium rates to the Workers' Compensation Board of Directors (WCB). The WCB provides its advice and consent at the September meeting. In November, the Administrator will present two rate rules for approval by the WCB. These rules will contain the calculated base rates for all manual classifications assigned to taxing districts. (The Actuarial Division will calculate these base rates in October and early November.)

Rate Level Recommendation

The Administrator is recommending a 0.0% rate increase for the policy year beginning January 1, 2008.

Rate Level Changes

The overall rate level change affects employers differently. A base or average rate is calculated for each manual classification. These rates result in an overall rate level that is the required change from last year at the aggregate level. However, some manual classifications may have rate changes that are smaller or larger than the rate change indication presented today. In addition, many employers are experience rated. For these employers, their individual loss data are used to help determine the individual rates they must pay.

Past Rate Changes

Period	Percent Change
1-1-2003	12.1% increase
1-1-2004	2% increase
1-1-2005	2% increase
1-1-2006	1% decrease
1-1-2007	3.2% increase

To: Marsha P. Ryan, Administrator
From: John R. Pedrick, FCAS, MAAA, Chief Actuarial Officer
Date: September 11, 2007
Subject: PEC Rate Change Effective 1/1/2008

I have reviewed the calculations and results in the attached "Rate Indications for Public Employer – Taxing Districts" (PECs) submitted by our actuarial consultant, Oliver Wyman (OW), and recommend the BWC implement an overall rate change of 0.0% for policy year 2008.

While OW has presented the results of six different scenarios, I base this recommendation on two of them that produce a range of reasonable changes from -1.8% to +2.4%. The first is the result of a conservative cost trend assumption and an interest rate of 5.0%. The second incorporates a central trend assumption with an interest rate of 4.0%. This range of changes, as well as my recommendation, balances the need to be responsive to the underlying cost trends, to reflect investment returns that can be expected over the long term, and to avoid unnecessary swings in rates from year to year.

The overall rate change will be spread to the rate classes used by PECs based on the experience in the classes, so some policyholders will see an increase in premium while others will see a decrease. The average of these changes will be 0.0%, based on the most recent payroll figures. Further details by classes will follow as we run this overall change through our rating system.

Discussion:

BWC is charged with setting rates that are the minimum necessary to meet the costs of providing workers' compensation insurance. This mandate is consistent with actuarial ratemaking principles:

> *"A rate is reasonable and not excessive, inadequate, or unfairly discriminatory if it is an actuarially sound estimate of the expected value of all future costs associated with an individual risk transfer.[1]"*

Oliver Wyman's actuarial calculations use compensation and compensation expense per $100 of payroll, known as pure premium, for policy years 2000 through 2006 to estimate the costs we will incur for policy year 2008. The estimates result from projections of cost trends to policy year 2008, and assumptions regarding the investment income that can be expected throughout the ensuing decades as payments are made for claims incurred during policy year 2008. The calculations are based on reasonable and appropriate actuarial methods and produce actuarially sound estimates of future costs.

In this report, OW has analyzed six scenarios, or sets of assumptions. Three scenarios used an interest rate of 5.0%, while the other three used an interest rate of 4.0%.

[1] Statement of Principles Regarding Property and Casualty Insurance Ratemaking, Casualty Actuarial Society.

Compensation and Compensation Expenses were discounted, using these interest rates, to policy year 2008. The underlying trends were then measured, showing pure premium changing at annual rates as low as -1.1% and as high as 1.1%. The scenarios used by OW along with the interest rate, annual trend, and the resulting indication are shown in the following table. The two scenarios I believe are most appropriate are in boldface.

Scenario	Interest Rate	Pure Premium Trend	Indication
Optimistic – 5%	5.0%	-1.1%	-11.1%
Baseline – 5%	5.0%	-0.2%	-8.6%
Conservative – 5%	**5.0%**	**2.0%**	**-1.8%**
Optimistic – 4%	4.0%	-0.9%	-0.5%
Baseline – 4%	**4.0%**	**0.1%**	**2.4%**
Conservative – 4%	4.0%	2.0%	8.7%

These six scenarios demonstrate the significant role played by the underlying interest rate, as demonstrated in the two baseline cases. With pure premium trends that are close to zero, a 1% decrease in interest rate increases the indication by 11%. Since we are setting rates for policy year 2008, premium will be due in 2009, and claims will be paid over several decades, a conservative decision today will help to avoid the possibility of deficiencies in these rate that emerge many years from now.

I have also considered the past rate changes implemented for PECs, shown below. In light of the 1% decrease for 2006, followed by a 3.2% increase in 2007, an overall change of 0% will avoid swings in rates from one year to the next.

Policy Year	Change
2000	0.0%
2001	3.7%
2002	6.4%
2003	12.1%
2004	2.0%
2005	2.0%
2006	-1.0%
2006	3.2%
2007	**0.0%**

Finally, the BWC has many issues to study over the next months and years, including the interest rates used in ratemaking and our overall methodologies. While some of the scenarios shown by OW support significant decreases, I recommend a more central and slightly conservative approach.

14 September 2007

1/1/2008 Rate Indications for Public Employer -- Taxing Districts

Ohio Bureau of Workers' Compensation

OLIVER WYMAN

OLIVER WYMAN

Oliver Wyman Actuarial Consulting, Inc.
325 John H McConnell Boulevard, Suite 350
Columbus, OH 43215
1 614 227 5509 Fax 1 614 227 6201
www.oliverwyman.com

September 14, 2007

Mr. John Pedrick, FCAS, MAAA
Chief Actuarial Officer
Ohio Bureau of Workers' Compensation
30 West Spring Street
Columbus, Ohio 43266-0581

Subject:
1/1/2008 Rate Indications for Public Employer -- Taxing Districts

Dear Mr. Pedrick:

The accompanying exhibits provide rate level scenarios, incurred loss projections and rate level factors for calculation of public employer – taxing districts (PEC) rates to be effective January 1, 2008.

We have calculated six rate level scenarios in Exhibits 1 and 1a using various assumptions to calculate discounted pure premiums, potential reductions in claim costs, and estimated average collectible rates. The indicated rate change in the baseline scenario uses 1) an extrapolation of the historical pure premiums obtained directly from the June 30, 2007 actuarial audit, 2) an annual trend of -0.2%, and 3) an interest rate of 5.00% in the calculation of the discounted ultimate losses. This produces an indicated rate change of -8.6%. A second scenario (reasonable expectation – optimistic) uses the lower -1.1% pure premium trend assumption and an investment return of 5.00%, producing an indicated rate decrease of -11.1%. A third scenario (reasonable expectation – conservative) uses an interest rate assumption of 5.00% along with a 2.0% pure premium trend. This is approximately 7.5% higher than the baseline. We have also calculated similar scenarios using a 4.00% interest rate. The following table illustrates the indicated rate changes by scenario:

Interest Rate	Baseline	Reasonable Expectation Optimistic	Reasonable Expectation Conservative
5.0%	-8.6%	-11.1%	-1.8%
4.0%	2.4%	-0.5%	8.7%

Mr. John Pedrick, FCAS, MAAA
Ohio Bureau of Workers' Compensation

The "baseline" rate level indication in Exhibit 1 is a statistical extrapolation of the historical pure premiums for accident years 2000 to 2006. The pure premiums for accident years 2000 to 2006 are derived from our June 30, 2007 actuarial evaluation of the PEC losses, using the same assumptions and a similar degree of conservatism as was used in the projections of reserves in the actuarial audit. Cost containment efforts and recent changes in BWC's procedures, to the extent they are reflected in payments, are considered in the rate indications.

The reasonable expectation-optimistic scenario considers lower trend of -1.1%, based on 2003-2006. This would reflect the possibility of lower than expected inflation rates in the future, potential improvements that may not yet have been reflected through payment reductions (e.g., possible reductions in costs due to medical payment reduction initiatives, additional BWC claims management programs, subrogation, etc.).

At this time, considering the various scenarios, it is our opinion that a rate change of -11.1% to +8.7% in the PEC rate level is appropriate. This range is wide primarily due to the different interest rate assumptions. Base rates for the individual manual classes should be adjusted according to their experience so as to achieve the applicable overall change in the total collectible premium per $100 payroll.

Exhibit 2 provides the applicable "rate level factors" for base rate calculations. Also included are incurred loss projections to be used to derive loss development factors for the base rate calculations. If we can provide further information or assistance in the rate calculations, please let us know.

Sincerely,

Jeffery J. Scott, FCAS, MAAA   Jeffery W. Scholl, FCAS, MAAA

JJS/JWS/mpg

Contents

1

Background

Rates for public employer – taxing districts (PEC) are promulgated each January, to be applicable to payrolls from January 1 to December 31 of that year. Rates are applicable per $100 of payroll. Payroll reports will be mailed in December of 2008 and employers will be required to pay a portion (45%) by May 15, 2009 with the balance due by September 1, 2009. For the rate indications, we have assumed that 45% of the premiums will be collected on May 15th and the balance will be collected on September 1.

There were 10 manual rating classifications (type of political subdivision – county, village, school, etc.), each with its own base rate. Although the Public-Work Relief Employees' Compensation Fund (PWREF) is a separate Fund, rates are established for this Fund as a separate manual class, using the same calculations as are used to establish PEC base rates.

Employers with over $8,000 of expected losses for the experience period are experience rated. The experience period used for experience rating will be the oldest four of the last five calendar years (e.g., 2003 to 2006 for the 2008 rate calculations). Retrospective rating plans also apply on an optional basis for employers with at least $25,000 in annual premium.

Base rates are calculated for each class to cover the expected cost of accidents to be incurred during the coverage period. Anticipated investment income is reflected in the calculation of expected costs. The base rate calculations use the loss experience for the oldest four of the last five calendar years for each class to project pure premiums (i.e., premiums necessary to cover the losses for a specific period of time). The projected pure premiums for each class are compared to the current average class rate to determine the indicated rate changes by class. It has been a long-standing policy to limit the changes in rates by class to no more than 30%.

2

Rate Level Recommendations

Three rate level scenarios are calculated in Exhibit 1 using various interest rate assumptions, potential reductions in claim costs, and estimated average collectible rates.

The rate level indications are predicated on the following assumptions (see Exhibit 1):

- The overall annual trend in pure premiums has been approximately -1.1% per year over the period 2003-2006 and +0.8% over the period 2000-2006. We have selected the average of these trend assumptions in Exhibit 1 and the pure premiums calculated in the June 30, 2007 actuarial audit (discounted @ 5.00% interest rate) to estimate the "baseline" scenario pure premium for the rating year effective 1/1/2008. This indication does not consider possible additional savings from medical payment reduction initiatives or BWC's cost containment measures and claims management programs. The reasonable expectation-optimistic scenario was calculated using the lower -1.1% trend assumption (or lower than expected inflation rates in the future) and an investment return assumption of 5.00%. The reasonable expectation – conservative uses an interest rate assumption of 5.00% along with an annual trend of 2.0%. This is approximately 7.5% higher than the baseline.

- We have also shown rate indications using a 4.0% annual investment return assumption.

- HPP costs are projected at $0.14 per $100 of payroll. These costs were calculated using the actual payments to MCO's for the fiscal year ending June 30, 2007.

- We have included $0.01 per $100 of payroll for OSIF non-claim payments. These are payments paid out of the OSIF for investment managers fees, transitional work grants, prepaid rehab services, attorney general fees, actuarial fees, transfers to safety grant programs, insurance premiums and other miscellaneous expenses.

- We have assumed that premium credits for the PDP and DFWP program will be offset by corresponding additional reductions in losses.

- An interest rate adjustment of 2.65% is included, which assumes an average premium collection date of July 13th. We have assumed that 45% of the premiums will be collected on May 15th and the balance will be collected on September 1, 2009.

- A loading of 1.00% is included for Safety and Hygiene;

- No margin has been included for contingencies.

- A loading of 0.0% is included for the Premium Payment Security Fund (PPSF) for all scenarios.

- We have not included an adjustment for additional subrogation other than what is included in the historical data. The stated goal of the program is an offset of 1% of losses by subrogation.

Individual manual classification base rates should be changed using their own loss experience as well as "off-balance" factors resulting from experience rating and group rating.

Terrorism Risk Insurance Act of 2002

Due to the passage of the Terrorism Risk Insurance Act and its subsequent renewal through 2007, the Ohio BWC is subject to assessment for terrorist related losses in other locations and lines of business, provided certain thresholds are met.

Consistent with our prior analyses, we have not included a provision for this act in the rate level indication. Due to Ohio's unique status as a monopolistic fund, the ability to collect premium after the fact is a possibility that can be considered in any decision to collect for potential terrorism connected losses.

3

Caveats

The costs of claims to be covered by the 1/1/08 rates will be the result of many future contingent events. There is considerable uncertainty in the projection of these costs. We have analyzed past cost experience and applied informed judgment to project loss costs into the future. The actual required rate level can vary significantly from our forecasts for many reasons. Some reasons for possible variance from our projections are:

- unanticipated changes in wage and benefit levels
- legislative changes
- unforeseen changes in claims consciousness
- unforeseen changes in claims settlement practices, cost containment programs and fraud investigation efforts
- unexpected judicial interpretation of statutes
- changes in medical inflation rates or utilization of medical services
- unexpected investment results, and
- other unforeseen economic conditions.

4

Loss Cost Trends and Projections of Future Costs

Losses are separately projected for medical and indemnity in the base rate calculations. The projections use "rate level factors" to adjust the losses from the experience period to the level anticipated for the rate period. We have used data from our actuarial evaluation as of 6/30/07 to calculate the historical trends in medical and indemnity costs. The results of these calculations are shown in Exhibit 1. Our projection of the pure premium anticipated for the rating period is derived separately for medical and indemnity, and the total projected pure premium is the sum of the projections for medical and indemnity.

The annual pure premiums for medical and indemnity losses display annual trends from 2003-2006 of approximately -0.9% and -1.5%, respectively. The overall trend in loss costs for medical and indemnity combined is approximately -1.1%. This implies that combined medical and indemnity costs have been rising considerably slower than payrolls have been increasing. The selected (discounted) pure premium for the rating year effective 1/1/08 to 12/31/08 is $1.44, using an extrapolation based on the "fitted" historical pure premiums as projected in the June 30, 2007 actuarial audit.

The rate level factors required to adjust the experience period losses to levels anticipated for the rate period are shown in Exhibit 2. We have also shown in Exhibit 2 the relevant incurred loss projections, which will be used to calculate "loss development factors" for the base rate calculations. These losses are calculated on a discounted basis (@ 5.00% interest), with an evaluation date as of December 31 of the accident year. For example, for accident year 2006, we have calculated the present value of losses as of December 31, 2006.

Various statistics are provided in Exhibit 3. The frequency of claims per employee appear to be declining.

Ohio Bureau of Workers' Compensation
Public Employers-Taxing Districts
Rate Level Analysis at 1/1/08

	Calendar Accident Year	Discounted Medical Pure Premium	Discounted Indemnity Pure Premium	Discounted Total Pure Premium
	2000	$0.87	$0.58	$1.45
	2001	0.82	0.49	1.31
	2002	1.04	0.53	1.57
	2003	1.01	0.52	1.54
	2004	0.96	0.50	1.45
	2005	0.99	0.50	1.49
	2006	0.97	0.50	1.47
(estimated)	2007	0.96	0.49	1.45
(estimated)	2008	0.95	0.48	1.43
Fitted Annual % Change 2000 - 2006		2.3%	-1.8%	0.8%
Fitted Annual % Change 2003 - 2006		-0.9%	-1.5%	-1.1%
1. Projected 1/1/2008 to 12/31/2008 using 00-06		**$1.05**	**$0.48**	**$1.52**
2. Projected 1/1/2008 to 12/31/2008 using 03-06		**$0.96**	**$0.48**	**$1.44**
3. Selected		**$1.01**	**$0.48**	**$1.48**

Scenarios:	**Baseline**	**Reasonable Expectation-Optimistic**	**Reasonable Expectation-Conservative**
Assumed Investment Return %	5.00%	5.00%	5.00%
Deviation from baseline due to claim cost and/or frequency changes	0.00%	-2.73%	7.49%
PDP/DFWP Adjustment			
Selected Discounted Pure Premium	$1.48	$1.44	1.59
Estimated Pure Premium for HPP Costs	$0.14	$0.13	$0.15
Estimated Pure Premium for Non-Claim Payment Costs	$0.01	$0.01	$0.01
Additional Loadings:			
S&H	1.00%	1.00%	1.00%
Contingency Margin	0.00%	0.00%	0.00%
PPSF	0.00%	0.00%	0.00%
Interest to 7/13/2008 (Notes 4 & 5)	2.65%	2.65%	2.65%
Pure Premium including HPP Costs	$1.69	$1.64	$1.81
Estimated Current Avg Rate, Inc. Retro Adj.	$1.85	$1.85	$1.85
Indicated Rate Change	-8.6%	-11.1%	-1.8%

Notes:

1. Pure premiums are based on the6/30/07 actuarial evaluation (discounted @5.00% unless otherwise noted).
2. Pure premiums shown were rounded to 2 decimal places. Actual calculations were performed using unrounded numbers.
3. Assumptions in various scenarios based on discussions with BWC.
4. Assumes 45% of premiums will be collected on 5/15/2009 and 55% on 9/1/2009.
5. The evaluation date for the calendar - accident years is December 31 of each accident year.

Ohio Bureau of Workers' Compensation
Public Employers-Taxing Districts
Rate Level Analysis at 1/1/08

	Calendar Accident Year	Discounted Medical Pure Premium	Discounted Indemnity Pure Premium	Discounted Total Pure Premium
	2000	$0.97	$0.62	$1.60
	2001	0.92	0.53	1.45
	2002	1.18	0.57	1.75
	2003	1.15	0.56	1.72
	2004	1.09	0.54	1.62
	2005	1.13	0.54	1.67
	2006	1.11	0.54	1.65
(estimated)	2007	1.10	0.53	1.63
(estimated)	2008	1.09	0.52	1.61
Fitted Annual % Change 2000 - 2006		2.6%	-1.6%	1.1%
Fitted Annual % Change 2003 - 2006		-0.7%	-1.1%	-0.9%
1. Projected 1/1/2008 to 12/31/2008 using 00-06		**$1.21**	**$0.52**	**$1.71**
2. Projected 1/1/2008 to 12/31/2008 using 03-06		**$1.09**	**$0.53**	**$1.62**
3. Selected		**$1.15**	**$0.52**	**$1.67**

Scenarios:	**Baseline**	**Reasonable Expectation-Optimistic**	**Reasonable Expectation-Conservative**
Assumed Investment Return %	**4.00%**	**4.00%**	**4.00%**
Deviation from baseline due to claim cost and/or frequency changes	0.00%	-2.83%	6.19%
PDP/DFWP Adjustment			
Selected Discounted Pure Premium	$1.67	$1.62	$1.77
Estimated Pure Premium for HPP Costs	$0.16	$0.15	$0.17
Estimated Pure Premium for Non-Claim Payment Costs	$0.01	$0.01	$0.01
Additional Loadings:			
S&H	1.00%	1.00%	1.00%
Contingency Margin	0.00%	0.00%	0.00%
PPSF	0.00%	0.00%	0.00%
Interest to 7/13/2008 (Notes 4 & 5)	2.12%	2.12%	2.12%
Pure Premium including HPP Costs	$1.89	$1.84	$2.01
Estimated Current Avg Rate, Inc. Retro Adj.	$1.85	$1.85	$1.85
Indicated Rate Change	2.4%	-0.5%	8.7%

Notes:

1. Pure premiums are based on the 6/30/07 actuarial evaluation (discounted @ 5.00% unless otherwise noted).
2. Pure premiums shown were rounded to 2 decimal places. Actual calculations were performed using unrounded numbers.
3. Assumptions in various scenarios based on discussions with BWC.
4. Assumes 45% of premiums will be collected on 5/15/2009 and 55% on 9/1/2009.
5. The evaluation date for the calendar - accident years is December 31 of each accident year.

Ohio Bureau of Workers' Compensation
Public Employers-Taxing Districts
Rate Level Factors and Incurred Loss
Projections at 1/1/08

	1/1/2008 Rate Level Factors		1/1/2008 Incurred Loss Projections (000's) Including Catastrophe Losses And Excluding Loss Limitations		
Accident Year	**Medical**	**Comp.**	**Medical**	**Comp.**	**Totals**
2002	0.921	0.905	$173,820	$88,931	$262,751
2003	0.944	0.922	182,727	94,043	276,770
2004	1.000	0.972	177,465	91,781	269,246
2005	0.964	0.964	184,647	92,829	277,476
2006	0.985	0.971	182,294	92,952	275,246

Note:
Evaluation date of losses is December 31 of each accident year.

Ohio Bureau of Workers' Compensation
Public Employers-Taxing Districts
Number of Lost-Time Claims, Frequency, and Ratio
Of Medical To Total Losses @ 12/31/06

(1) Accident Year	(2) Discounted Medical Incurred @ 12/xx	(3) Discounted Indemnity Incurred @ 12/xx	(4) Total Incurred @ 12/xx	(5) Ultimate Number of Claims	(6) Frequency per Employee	(7) SAWW	(8) Number of Employees (Millions)	(9) Discounted Medical % Total	(10) Payroll (Millions)
2000	131,034	87,278	218,312	6,131	0.0131	618.35	0.469	60.0%	15,089
2001	129,857	77,989	207,846	5,508	0.0114	631.45	0.481	62.5%	15,809
2002	173,820	88,931	262,751	5,767	0.0117	652.48	0.493	66.2%	16,717
2003	182,727	94,043	276,770	5,491	0.0106	670.77	0.516	66.0%	18,004
2004	177,465	91,781	269,246	5,419	0.0106	694.68	0.513	65.9%	18,524
2005	184,647	92,829	277,476	5,182	0.0103	710.72	0.503	66.5%	18,585
2006	182,294	92,952	275,246	5,053	0.0103	735.05	0.490	66.2%	18,740

Notes :

Columns (2), (3), And (4) Are In Thousands.
Col(6) = Col(5) / Col(8) / 1,000,000
Col(8) = Payroll / [Col(7) X 52].
All Data Is From Actuarial Evaluation as of June 30, 2007.

Exhibit 4

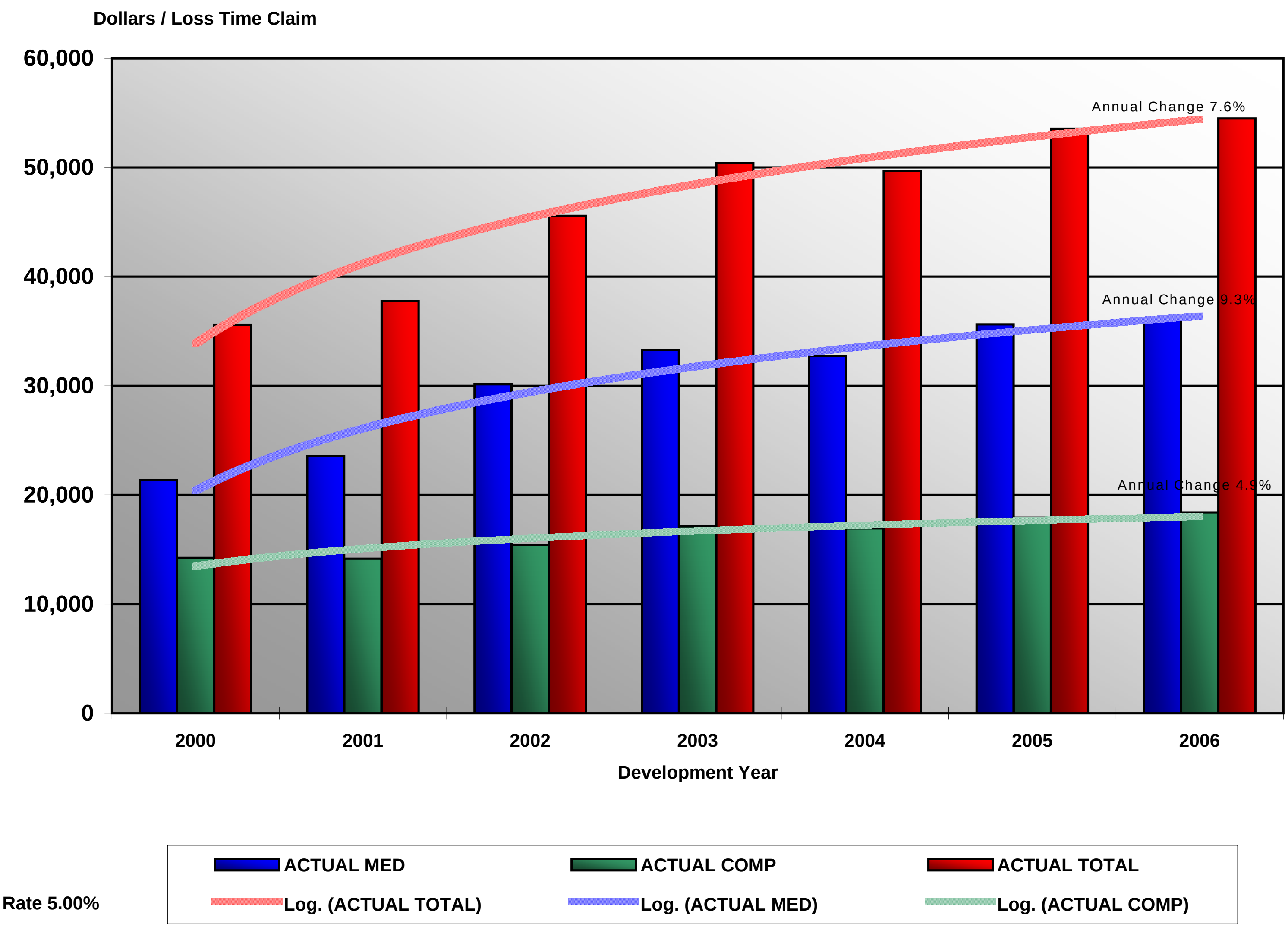
Ohio Bureau of Workers' Compensation
Public Employers-Taxing Districts
Adjustments to Published Rate
To Provide Estimated Collectible Rate

(1) Accident Year	(2) Actual Premium ($MILL)	(3) Average Published Rate @ 1/1	(4) Actual Average Collected Rate	(5) Percent Difference (4)/(3)-1
2002	255	1.62	1.53	-5.76%
2003	296	1.81	1.65	-9.10%
2004	315	1.84	1.70	-7.58%
2005	330	1.89	1.78	-5.99%

Notes :

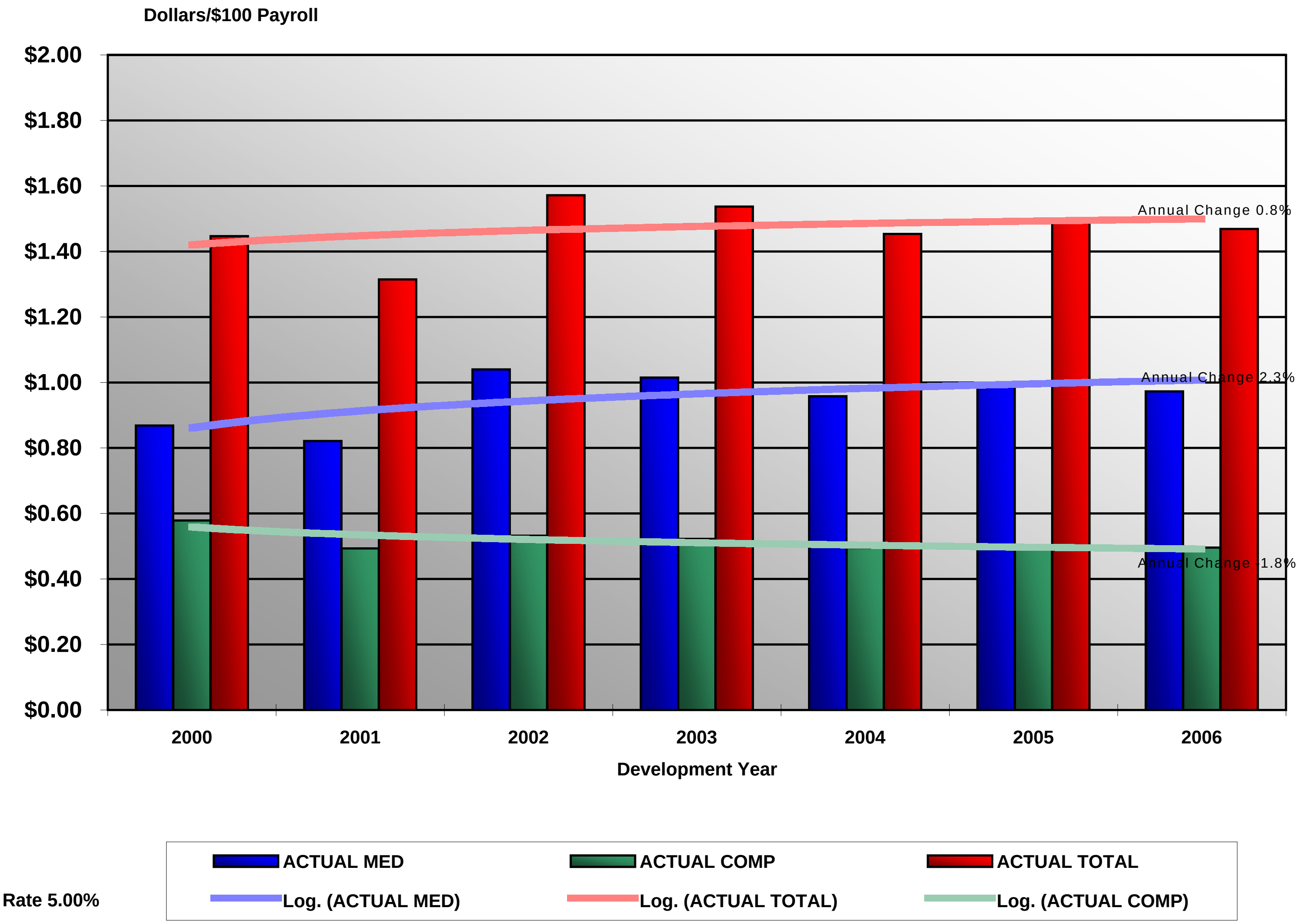
All Data Is From Actuarial Evaluation as of June 30, 2007.

DISCOUNTED AVERAGE SEVERITY BY TYPE OF BENEFIT (PEC)



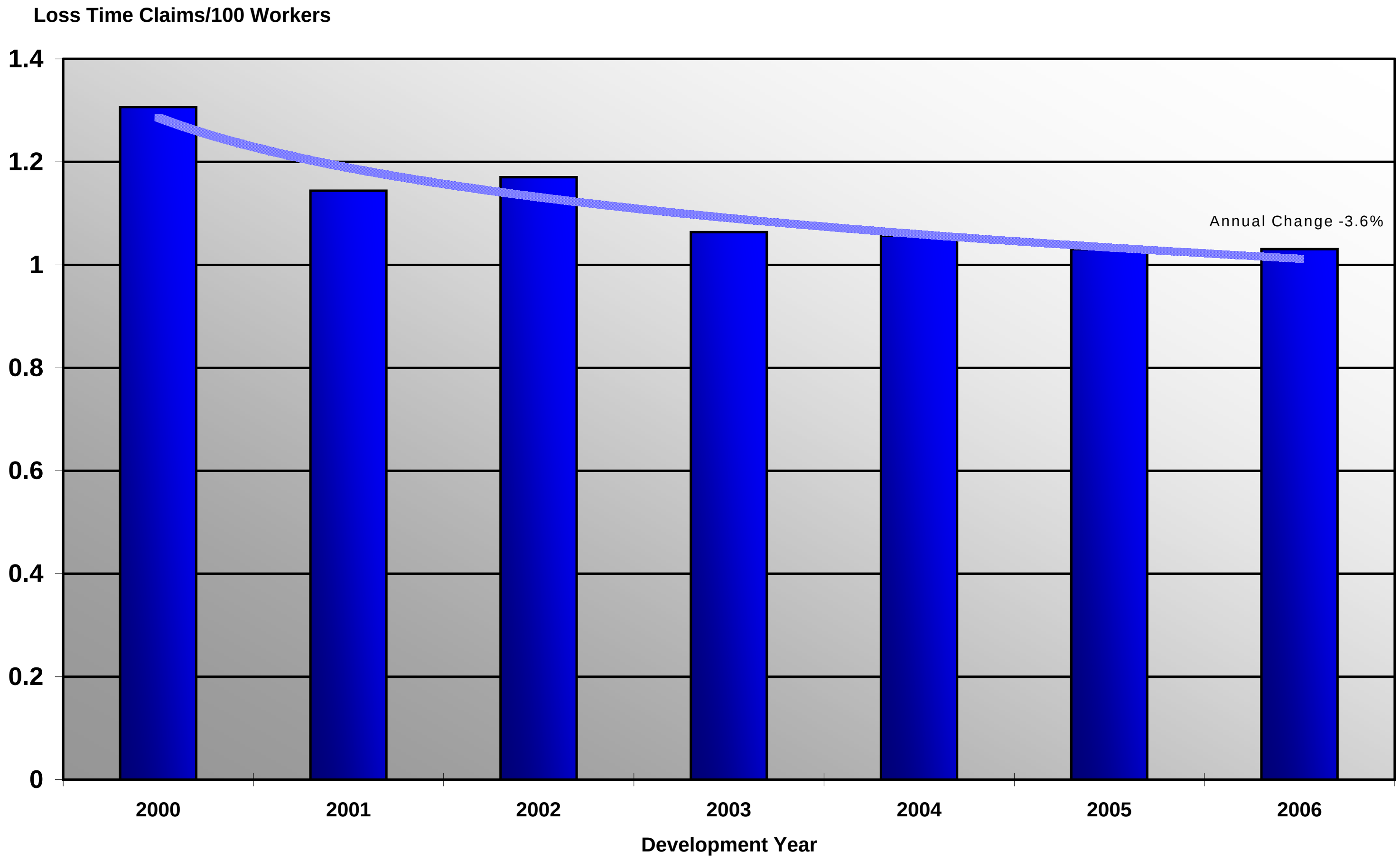
Discount Rate 5.00%

DISCOUNTED PURE PREMIUM
BY TYPE OF BENEFIT (PEC)



Discount Rate 5.00%

PEC LOSS TIME CLAIM FREQUENCY



Discount Rate 5.00%

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Annuity Factors

Executive Summary

Rule: 4123-17-60
Effective date: December 31, 2007

The annuity tables in Rule 4123-17-60 consist of five tables containing life expectancy factors that are used in the calculation of individual claim reserves. The factors are created as a result of a Mortality Study of Ohio claims using the current discount rate of 5.00%. The mortality study was conducted by Oliver Wyman, Actuarial Consultants, using only Ohio data. The BWC also uses the annuity tables in the calculation of the net present value (NPV) to reduce an advancement of lump sum of money that an injured worker may receive when settling their workers' compensation claim. These tables will not impact injured worker's benefit rates.

The five tables include:

1. **"Survivor Annuity Factors"** are factors used in the calculation of the reserves or NPV for death claims filed by the surviving spouse. The surviving spouse is eligible for benefits due to an allowed death claim for the remainder of the spouse's life or until remarriage.
2. **"Orphans Annuity Factors"** are factors used in the calculation of the reserves or NPV for death claims filed on behalf of minor dependants. The surviving minor dependant is eligible for benefits due to an allowed death claim until age 18 or age 25 if pursuing a full-time educational program while enrolled in an accredited educational institution. This also includes children who are physically or mentally incapacitated from having any earnings so long as the physical or mental incapacity continues.
3. **"PTD Annuity Factors – Regular Injury"** are factors used in the calculation of reserves or NPV on allowed Permanent and Total Disabled (PTD) claims. PTD benefits are paid for the life of the claimant.
4. **"PTD Annuity Factors – Occupational Disease - Lung"** are factors used in the calculation of reserves or NPV on allowed Permanent and Total Disabled (PTD) claims where the allowed condition is a lung related injury such as pneumoconiosis. PTD benefits are paid for the life of the claimant.
5. **"PTD Annuity Factors – Occupational Disease – Non-Lung"** are factors used in the calculation of reserves or NPV on allowed Permanent and Total Disabled (PTD) claims where the allowed condition is an occupational condition other than a lung disease such as carpel tunnel syndrome. PTD benefits are paid for the life of the claimant

Rate Rule Process:

- Actuarial Section presents and recommends to the Workers' Compensation Board, rule 4123-17-60, Annuity Tables.
- Workers' Compensation Board provides advice and consent to the rule.
- Rules are filed with Legislative Services Commission and Secretary of State by December 20, 2007.
- Annuity Tables become effective December 31, 2007.

4123-17-60 **Annuity factors**

The administrator of workers' compensation, with the advice and consent of the workers' compensation ~~oversight commission~~ board of directors, has authority to approve contributions made to the state insurance fund by employers pursuant to sections 4121.121, 4123.29, and 4123.34 of the Revised Code. The administrator hereby establishes annuity factors for use in establishing claims reserves and premium rates as indicated in the attached Appendixes A, B, C, D, and E. The basis and interest factor of each annuity factor table is indicated on the appendix.

TO BE REENACTED

Appendix A

SURVIVOR ANNUITY FACTORS

AGE	FACTOR	AGE	FACTOR	AGE	FACTOR
17	949	48	879	79	519
18	953	49	873	80	502
19	956	50	867	81	485
20	957	51	861	82	467
21	958	52	854	83	450
22	958	53	846	84	433
23	957	54	839	85	416
24	957	55	831	86	399
25	956	56	823	87	382
26	955	57	814	88	366
27	954	58	805	89	350
28	952	59	796	90	335
29	951	60	786	91	321
30	949	61	776	92	308
31	946	62	765	93	295
32	944	63	754	94	283
33	941	64	742	95	271
34	938	65	730	96	260
35	935	66	718	97	249
36	932	67	705	98	237
37	929	68	692	99	226
38	925	69	678	100	215
39	922	70	664	101	203
40	918	71	649	102	192
41	913	72	634	103	180
42	909	73	619	104	168
43	905	74	603	105	156
44	900	75	586	106	144
45	895	76	570	107	133
46	890	77	553	108	121
47	885	78	536	109	111
				110	100

NOTE: Factors are annuities per dollar of weekly compensation benefit from the attained age indicated.

SOURCE: 2000a Basic Female Mortality Table, modified remarriage factors, 5.00% interest.

Ohio Bureau of Workers' Compensation
Board of Directors
Actuarial Committee

Issues Draft

1. Group Rating Methodology

2. Target Net Assets

3. Undiscounted Ultimate Loss Reserves

4. Discount Rate Selection and Application

5. Use of Actuarial Consultants

6. Medical Cost Trend – Measuring and Controlling

7. Use of NCCI Methodologies

8. Dividend Policy and Procedures

9. Data Quality

10. Information Sharing with Industrial Commission

Actuarial Committee Calendar

September	October
1. Public Employer Taxing Districts rate change 2. Annuity Table - Rule 4123-17-60 **Other:** Actuarial Committee Charter MIRA 2 Reserving System Inspector General report - BWC response Fee Schedules and Medical Inflation Rule making process H.B. 100 committee responsibilities AON Report	**Other:** Group Rating Pricing Study briefing Actuarial Audit Reserves - Oliver Wyman, consulting actuaries Reserve levels NCCI/BWC State of the line report comparisons
November	**December**
1. Public Employer Taxing Districts Rate - Rule 4123-17-33 2. Public Employer Taxing Districts Credibilit, Limited Loss Ratio and Industry Group tables - Rule 4123-17-34 3. Private Employer Credibility table - Rule 4123-17-06 (possibly need to do early based upon changes to the group rating rules.) **Other:** Appropriate level for Net Assets Actuarial Staffing Actuarial Contracts - Committee RFP	1. Public Employer State Agency - Rule 4123-17-35 to adopt new MCO fee percentage per MCO contract changes.
January	**February**
March	**April**
May	**June**
1. Private Employer Base Rate - Rule 4123-17-05 2. Private Employer Credibility, Limited Loss Ratio and Industry group tables - Rule 4123-17-06 3. Self-insured Assesment Rate - Rule 4123-17-32 4. Coal Worker's Pneumoconiois Fund Rate - Rule4123-17-20 5. Marine Fund Rate - Rule 4123-17-19 6. Disabled Workers' Relief Fund Assessments Rate - Rule 4123-17-29 7. One Claim Program Rule - **Possible** 8. Administrative Cost Assessment - Rule 4123-17-36 (Finance)	
July	**August**